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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,319	08/28/2001	James J. Alwan	AIRFIBE.004A	6272
20995	7590	12/02/2004	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP			TRAN, DZUNG D	
2040 MAIN STREET			ART UNIT	
FOURTEENTH FLOOR			PAPER NUMBER	
IRVINE, CA 92614			2633	

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/941,319

Applicant(s)

ALWAN ET AL.

Examiner

Dzung D Tran

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-71 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-10, 12-25, 28-44, 46-60 and 62-71 is/are rejected.
- 7) ☒ Claim(s) 4-6, 11, 26, 27, 45 and 61 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Specification***

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 7-10, 12-25, 28-44, 46-60 and 62-71 are rejected under 35 U.S.C. 102(b) as being anticipated by Cato US patent no. 5,229,593.

Regarding claims 19, 41, 47, 55, 59-60 and 68-70, Cato discloses in figure 1, a system configured for controlling laser power in a communication system which includes a first node (communication terminal A, col. 4, line 56) and a second node (communication terminal B, col. 4, line 57) where the first node transmits a first beam 15 (col. 4, line 59) to the second node and the second node transmits a second beam 15' (col. 4, line 61) to the first node and where the first and second beams maintain a safe exposure level to a blocking object (abstract), the system comprising: a first node (e.g. communication terminal A) having a transmitter 12 and a receiver 13 (inherently is a first transceiver) configured to transmit a first beam 15 at a first power level and configured to receive a second beam 15'; a second node (e.g. communication terminal

B) having a transmitter 12' and a receiver 13' (inherently is a second transceiver) configured to transmit the second beam 15' at a second power level to the first transceiver and configured to receive the first beam 15 transmitted by the first transceiver; a microprocessor 11 (same as claimed a first control module) configured to control the first transceiver to maintain a safe exposure level to a blocking object by changing the first power level of the first beam based on the power level of the received second beam (col. 5, lines 25-26, col. 6, lines 50-60); and a microprocessor 11' (same as claimed a second control module) configured to control the second transceiver to maintain the safe exposure to the blocking object by changing the second power level of the second beam based on the power level of the received first beam (col. 5, lines 25-26, col. 6, lines 50-60).

Regarding claims 1 and 71, Cato further discloses pulsing the power of the first beam to limit the radiation exposure of the blocking object to the safe level (col. 6, lines 7-9), transmitting information during the pulsing of the first beam to reestablish communication with the second node (col. 6, lines 45-60) and increasing the power of the first beam to the first level (col. 7, lines 10-11).

Regarding claims 2 and 3, Cato discloses in figure 1 is a bi-directional in a free space, therefore, it is inherently that the system would perform the same function in both direction (e.g. transmits the first beam from the first node to the second node or transmits the second beam from the first node to the second node) that is reducing the power of the second beam to the second level when power of the first beam received at the second node is reduced below the minimum value to limit an object's radiation

exposure to a safe level when the object blocks the second beam and pulsing the power of the second beam to limit the radiation exposure of the blocking object to the safe level.

Regarding claims 7 and 37, Cato discloses transmitting information includes orientation information (col. 7, lines 2-3).

Regarding claim 8, Cato discloses the transmitting information includes node Identification (col. 7, lines 6-7).

Regarding claim 9, Cato discloses the transmitting information includes node position (col. 7, lines 2-3).

Regarding claims 10 and 62, Cato discloses the transmitting information includes a confirmation signal (col. 3, line 68, col. 6, line 18 (e.g. same as claimed acquisition information) and other information (e. g. terminal ID code, location code, col. 7, lines 2-8).

Regarding claims 12 and 63, Cato discloses a predetermined frequency is determined primarily by the desired signal to noise (col. 4, lines 39-42).

Regarding claims 14-17 and 64-66, Cato discloses reducing the power of the first beam satisfies a class 1 level (col. 5, lines 66-67, col. 6, lines 64-66).

Regarding claims 18 and 67, Cato discloses pulsing the power of the first beam provide an adequate signal to noise ratio to communicate with the node (col. 4, lines 5-7, 48-52).

Regarding claims 20-21, Cato discloses a transmitter 12 and a receiver 13 of terminal A and receiver 13' and a transmitter 12' of terminal B.

Regarding claims 22-23, Cato discloses the communication electronics (24, 14, 16) configured to couple the first control module 11 to the a transmitter 12 and a receiver 13 (same as claimed first transceiver) and the communication electronics (24', 14', 16') configured to couple the second control module 11' to the a transmitter 12' and a receiver 13' (same as claimed second transceiver).

Regarding claim 24, Cato further discloses receiver 13 is a photo-detector (same as optical detector) (col. 4, lines 66-67).

Regarding claims 25, 38-40 and 52-54, Cato further discloses receiver include a detector for detecting a blockage or misalignment of the output laser beam base upon the received input laser beam which includes a confirmation signal modulated (e.g. confirmation signal include power level information or signal strength) (col. 3, lines 38-47).

Regarding claims 28, 29 and 42, Cato further discloses a microprocessor 11 (same as claimed a first control module) configured to operates the laser 12 at two power level (col. 4, line 45), the high power normal level and at the low power safety level (e.g. level power at multiple modes) (col. 7, lines 63-66).

Regarding claims 30 and 43, Cato discloses a microprocessor 11 (same as claimed a first control module) configured to change the laser 12 at the high power normal level (col. 7, lines 64-65).

Regarding claims 31 and 44, Cato discloses a microprocessor 11 (same as claimed a first control module) configured to change the laser 12 at the low power safety level (col. 7, lines 64-65).

Regarding claims 13, 33 and 46, Cato discloses the high power normal level is harmful to human (col. 5, lines 63-66).

Regarding claims 34-36 and 48-50, Cato further discloses the control module is a microprocessor 11. Furthermore, whether a controller is a programmable logic device or a microprocessor or a microcomputer is merely an engineering design choice.

Regarding claim 51, Cato further discloses in figure 1, the first 11 and second processor 11' receives multiple signals from the first and second receiver 13 and 13'.

Regarding claims 56-58, Cato further discloses the detecting at the first transceiver based on the received input laser beam which include the blockage or misalignment or other similar condition information (e.g. received power reduce, the confirmation signal is not received within a predetermined period of time) (col. 3, lines 38-41, col.3, line 67 to col. 4, line 5, col. 5, lines 25-26, col. 6, lines 50-60).

3. Claims 4-6, 11, 26-27, 32, 45 and 61 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Helms et al. U.S. patent no. 6,643,466. Method and apparatus for controlling signal power level in free space communication


- b. Goodwill U.S. patent no. 6,775,480. Free space optical interconnect system.
- c. Bloom et al. U.S. patent no. 6,594,043. System and method for providing an eye laser communication system.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DT  
11/12/2004

  
M. R. SEDIGHIAN  
PRIMARY EXAMINER